

#4

DOCKET NO.: ISIS-4804

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Manoharan, et al.

Serial No.: 09/996,292

Group Art Unit: Not yet assigned

Filing Date: 3/13/02

Examiner: Not yet assigned

For: Nuclease Resistant Chimeric Oligonucleotides

I, Jane E. Inglese, Registration No. 48,444 certify that this correspondence is being deposited with the U.S. Postal Service as First Class mail in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.

On March 29, 2002  
Jane Inglese  
Jane E. Inglese, Reg. No. 48,444

U. S. Patent and Trademark Office  
Box Sequence, P.O. Box 2327  
Arlington, Virginia 22202

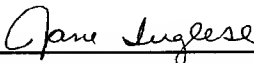
STATEMENT TO SUPPORT FILING AND SUBMISSION IN ACCORDANCE  
WITH 37 CFR §§ 1.821 THROUGH 1.825

- ☒ I hereby state, in accordance with the requirements of 37 C.F.R. §1.821(f), that the contents of the paper and computer readable copies of the Sequence Listing, submitted in accordance with 37 CFR §1.821(c) and (e), respectively are the same.
- ☐ I hereby state that the submission filed in accordance with 37 CFR §1.821(g) does not include new matter.
- ☐ I hereby state that the submission filed in accordance with 37 CFR §1.821(h) does not include new matter or go beyond the disclosure in the international application as filed.
- ☒ I hereby state that the amendments, made in accordance with 37 CFR §1.825(a), included in the substitute sheet(s) of the Sequence Listing are supported throughout the application, as filed. I hereby state that the substitute sheet(s) of the Sequence Listing does (do) not include new matter.

☒ I hereby state that the substitute copy of the computer readable form, submitted in accordance with 37 CFR §1.825(b), is the same as the amended Sequence Listing.

☐ I hereby state that the substitute copy of the computer readable form, submitted in accordance with 37 CFR §1.825(d), contains identical data to that originally filed.

Date: March 29, 2002

  
\_\_\_\_\_  
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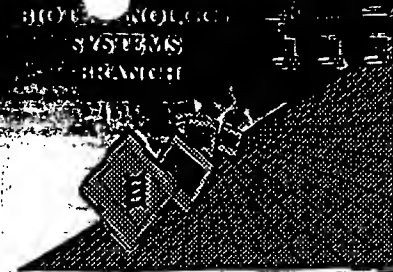


**ATTACHMENT TO "NOTICE TO COMPLY WITH  
REQUIREMENTS...SEQUENCE DISCLOSURES"**

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be submitted using one of the following methods:

1. Electronically submitted through EFS-Bio  
(<http://www.uspto.gov/ebs/efs/downloads/documents.htm>, EFS Submission User Manual - ePAVE)
2. Mailed to:  
U.S. Patent and Trademark Office  
Box Sequence, P.O. Box 2327  
Arlington, VA 22202
3. Mailed by Federal Express, United Parcel Service or other delivery service to:  
U. S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window, Box Sequence  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, Virginia 22202
4. Hand Carried directly to the Customer Window at:  
2011 South Clark Place  
Crystal Plaza Two, Lobby, Room 1B03, Box Sequence,  
Arlington, Virginia 22202

# RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/996,292  
Source: OIP E  
Date Processed by STIC: 12/6/01

**THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.**

**PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:**

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

**FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.**

**FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.**

**PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)**

**PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)**

**TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:**

## Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

**Checker Version 3.0 can be down loaded from the USPTO website at the following address:**

**<http://www.uspto.gov/web/offices/pac/checker>**



## Raw Sequence Listing Error Summary

### ERROR DETECTED    SUGGESTED CORRECTION

SERIAL NUMBER: 09/996, 292

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 ☐ Wrapped Nucleics  
Wrapped Aminos    The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 ☐ Invalid Line Length    The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 ☐ Misaligned Amino  
Numbering    The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 ☐ Non-ASCII    The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 ☐ Variable Length    Sequence(s) \_\_\_\_\_ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 ☐ PatentIn 2.0  
"bug"    A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) \_\_\_\_\_. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 ☐ Skipped Sequences  
(OLD RULES)    Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
This sequence is intentionally skipped  
  
Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 ☐ Skipped Sequences  
(NEW RULES)    Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence.  
<210> sequence id number  
<400> sequence id number  
000
- 9 ☒ Use of n's or Xaa's  
(NEW RULES)    Use of n's and/or Xaa's have been detected in the Sequence Listing.  
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 ☐ Invalid <213>  
Response    Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 ☒ Use of <220>    Sequence(s) most missing the <220> "Feature" and associated numeric identifiers and responses.  
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 ☐ PatentIn 2.0  
"bug"    Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.



OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/996,292

DATE: 12/06/2001

TIME: 11:33:45

Input Set : A:\ISIS4804.ST25.txt

Output Set: N:\CRF3\12062001\I996292.raw

**Does Not Comply  
Corrected Diskette Needed**

3 <110> APPLICANT: Manoharan, Muthiah  
 5 <120> TITLE OF INVENTION: Nuclease Resistant Chimeric Oligonucleotides  
 7 <130> FILE REFERENCE: ISIS-4804  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/996,292  
 C--> 9 <141> CURRENT FILING DATE: 2001-11-28  
 9 <160> NUMBER OF SEQ ID NOS: 55  
 11 <170> SOFTWARE: PatentIn version 3.1  
 13 <210> SEQ ID NO: 1  
 14 <211> LENGTH: 20  
 15 <212> TYPE: DNA  
 16 <213> ORGANISM: Artificial Sequence  
 18 <220> FEATURE:  
 19 <223> OTHER INFORMATION: Novel Sequence  
 21 <220> FEATURE:  
 22 <221> NAME/KEY: misc\_feature  
 23 <222> LOCATION: (1)..(20)  
 24 <223> OTHER INFORMATION: All P=S  
 27 <220> FEATURE:  
 28 <221> NAME/KEY: misc\_feature  
 29 <222> LOCATION: (1)..(1)  
 30 <223> OTHER INFORMATION: N= L-Thymidine  
 33 <220> FEATURE:  
 34 <221> NAME/KEY: misc\_feature  
 35 <222> LOCATION: (20)..(20)  
 36 <223> OTHER INFORMATION: N= L-Thymidine  
 39 <400> SEQUENCE: 1  
 W--> 40 ngcatccccc aggccaccan  
 43 <210> SEQ ID NO: 2  
 44 <211> LENGTH: 17  
 45 <212> TYPE: DNA  
 46 <213> ORGANISM: Artificial Sequence  
 48 <220> FEATURE:  
 49 <223> OTHER INFORMATION: Novel Sequence  
 51 <220> FEATURE:  
 52 <221> NAME/KEY: misc\_feature  
 53 <222> LOCATION: (1)..(17)  
 54 <223> OTHER INFORMATION: All P=S  
 57 <220> FEATURE:  
 58 <221> NAME/KEY: misc\_feature  
 59 <222> LOCATION: (1)..(1)  
 60 <223> OTHER INFORMATION: N= L-Thymidine  
 63 <220> FEATURE:  
 64 <221> NAME/KEY: misc\_feature  
 65 <222> LOCATION: (2)..(3)  
 66 <223> OTHER INFORMATION: N= 2'-O-MOE 5meC  
 69 <220> FEATURE:  
 70 <221> NAME/KEY: misc\_feature

→ The type of errors shown exist throughout  
the Sequence Listing. Please check subsequent  
sequences for similar errors.

- invalid response, see error summary  
sheet, item 11  
(must explain source of genetic material)

20

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/996,292

DATE: 12/06/2001  
 TIME: 11:33:45

Input Set : A:\ISIS4804.ST25.txt  
 Output Set: N:\CRF3\12062001\I996292.raw

71 <222> LOCATION: (15)..(15)  
 72 <223> OTHER INFORMATION: N= 2'-O-MOE A  
 75 <220> FEATURE:  
 76 <221> NAME/KEY: misc\_feature  
 77 <222> LOCATION: (16)..(16)  
 78 <223> OTHER INFORMATION: N= 2'-O-MOE 5meU.  
 81 <220> FEATURE:  
 82 <221> NAME/KEY: misc\_feature  
 83 <222> LOCATION: (17)..(17)  
 84 <223> OTHER INFORMATION: N= L-Thymidine  
 87 <400> SEQUENCE: 2  
 W--> 88 nnncgctgtg atgcnnn 17  
 91 <210> SEQ ID NO: 3  
 92 <211> LENGTH: 20  
 93 <212> TYPE: DNA  
 94 <213> ORGANISM: Artificial Sequence  
 96 <220> FEATURE:  
 97 <223> OTHER INFORMATION: Novel Sequence  
 99 <220> FEATURE:  
 100 <221> NAME/KEY: misc\_feature  
 101 <222> LOCATION: (1)..(20)  
 102 <223> OTHER INFORMATION: All P=S  
 105 <220> FEATURE:  
 106 <221> NAME/KEY: misc\_feature  
 107 <222> LOCATION: (1)..(1)  
 108 <223> OTHER INFORMATION: N= L-Thymidine  
 111 <220> FEATURE:  
 112 <221> NAME/KEY: misc\_feature  
 113 <222> LOCATION: (2)..(3)  
 114 <223> OTHER INFORMATION: N= 2'-O-MOE 5meC  
 117 <220> FEATURE:  
 118 <221> NAME/KEY: misc\_feature  
 119 <222> LOCATION: (13)..(14)  
 120 <223> OTHER INFORMATION: N= 2'-O-MOE 5meC  
 123 <220> FEATURE:  
 124 <221> NAME/KEY: misc\_feature  
 125 <222> LOCATION: (15)..(15)  
 126 <223> OTHER INFORMATION: N= 2'-O-MOE 5meU  
 129 <220> FEATURE:  
 130 <221> NAME/KEY: misc\_feature  
 131 <222> LOCATION: (16)..(16)  
 132 <223> OTHER INFORMATION: N= 2'-O-MOE 5meC  
 135 <220> FEATURE:  
 136 <221> NAME/KEY: misc\_feature  
 137 <222> LOCATION: (17)..(17)  
 138 <223> OTHER INFORMATION: N= 2'-O-MOE A  
 141 <220> FEATURE:  
 142 <221> NAME/KEY: misc\_feature  
 143 <222> LOCATION: (18)..(19)

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/996,292

DATE: 12/06/2001  
TIME: 11:33:45

Input Set : A:\ISIS4804.ST25.txt  
Output Set: N:\CRF3\12062001\I996292.raw

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144 <223> OTHER INFORMATION: N= 2'-O-MOE G
147 <220> FEATURE:
148 <221> NAME/KEY: misc_feature
149 <222> LOCATION: (20)..(20)
150 <223> OTHER INFORMATION: N= L-Thymidine
153 <400> SEQUENCE: 3
W--> 154 nnngtcatcg ctnnnnnnnnn 20
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158 <211> LENGTH: 20
159 <212> TYPE: DNA
160 <213> ORGANISM: Artificial Sequence
162 <220> FEATURE:
163 <223> OTHER INFORMATION: Novel Sequence
165 <220> FEATURE:
166 <221> NAME/KEY: misc_feature
167 <222> LOCATION: (1)..(20)
168 <223> OTHER INFORMATION: All P=S
171 <400> SEQUENCE: 4
172 tgcattcccc aggccacat 20
175 <210> SEQ ID NO: 5
176 <211> LENGTH: 20
177 <212> TYPE: DNA
178 <213> ORGANISM: Artificial Sequence
180 <220> FEATURE:
181 <223> OTHER INFORMATION: Novel Sequence
183 <220> FEATURE:
184 <221> NAME/KEY: misc_feature
185 <222> LOCATION: (1)..(20)
186 <223> OTHER INFORMATION: All P=S
189 <220> FEATURE:
190 <221> NAME/KEY: misc_feature
191 <222> LOCATION: (1)..(1)
192 <223> OTHER INFORMATION: N= L-Thymidine
195 <220> FEATURE:
196 <221> NAME/KEY: misc_feature
197 <222> LOCATION: (20)..(20)
198 <223> OTHER INFORMATION: N= L-Thymidine
201 <400> SEQUENCE: 5
W--> 202 ngcatcccc aggccaccan 20
205 <210> SEQ ID NO: 6
206 <211> LENGTH: 17
207 <212> TYPE: DNA
208 <213> ORGANISM: Artificial Sequence
210 <220> FEATURE:
211 <223> OTHER INFORMATION: Novel Sequence
213 <220> FEATURE:
214 <221> NAME/KEY: misc_feature
215 <222> LOCATION: (1)..(17)
216 <223> OTHER INFORMATION: All P=S

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## RAW SEQUENCE LISTING

DATE: 12/06/2001

PATENT APPLICATION: US/09/996,292

TIME: 11:33:45

Input Set : A:\ISIS4804.ST25.txt

Output Set: N:\CRF3\12062001\I996292.raw

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219 <400> SEQUENCE: 6
220 tccccgtgtg atgcatt
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224 <211> LENGTH: 17
225 <212> TYPE: DNA
226 <213> ORGANISM: Artificial Sequence
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229 <223> OTHER INFORMATION: Novel Sequence
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232 <221> NAME/KEY: misc_feature
233 <222> LOCATION: (1)..(17)
234 <223> OTHER INFORMATION: All P=S
237 <220> FEATURE:
238 <221> NAME/KEY: misc_feature
239 <222> LOCATION: (1)..(1)
240 <223> OTHER INFORMATION: N= L-Thymidine
243 <220> FEATURE:
244 <221> NAME/KEY: misc_feature
245 <222> LOCATION: (2)..(3)
246 <223> OTHER INFORMATION: N= 2'-O-MOE 5mec
249 <220> FEATURE:
250 <221> NAME/KEY: misc_feature
251 <222> LOCATION: (15)..(15)
252 <223> OTHER INFORMATION: N= 2'-O-MOE A
255 <220> FEATURE:
256 <221> NAME/KEY: misc_feature
257 <222> LOCATION: (16)..(16)
258 <223> OTHER INFORMATION: N= 2'-O-MOE 5meU
261 <220> FEATURE:
262 <221> NAME/KEY: misc_feature
263 <222> LOCATION: (17)..(17)
264 <223> OTHER INFORMATION: N= L-Thymidine
267 <400> SEQUENCE: 7
W--> 268 nnnccgtgtg atgcnnn
271 <210> SEQ ID NO: 8
272 <211> LENGTH: 20
273 <212> TYPE: DNA
274 <213> ORGANISM: Artificial Sequence
276 <220> FEATURE:
277 <223> OTHER INFORMATION: Novel Sequence
279 <220> FEATURE:
280 <221> NAME/KEY: misc_feature
281 <222> LOCATION: (1)..(20)
282 <223> OTHER INFORMATION: All P=S
285 <220> FEATURE:
286 <221> NAME/KEY: misc_feature
287 <222> LOCATION: (1)..(1)
288 <223> OTHER INFORMATION: N= L-Cytidine
291 <220> FEATURE:

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## RAW SEQUENCE LISTING

DATE: 12/06/2001

PATENT APPLICATION: US/09/996,292

TIME: 11:33:45

Input Set : A:\ISIS4804.ST25.txt

Output Set: N:\CRF3\12062001\I996292.raw

292 <221> NAME/KEY: misc\_feature  
 293 <222> LOCATION: (2)..(2)  
 294 <223> OTHER INFORMATION: N= 2'-O-MOE 5meU  
 297 <220> FEATURE:  
 298 <221> NAME/KEY: misc\_feature  
 299 <222> LOCATION: (3)..(3)  
 300 <223> OTHER INFORMATION: N= 2'-O-MOE A  
 303 <220> FEATURE:  
 304 <221> NAME/KEY: misc\_feature  
 305 <222> LOCATION: (4)..(4)  
 306 <223> OTHER INFORMATION: N= 2'-O-MOE G  
 309 <220> FEATURE:  
 310 <221> NAME/KEY: misc\_feature  
 311 <222> LOCATION: (5)..(5)  
 312 <223> OTHER INFORMATION: N= 2'-O-MOE A  
 315 <220> FEATURE:  
 316 <221> NAME/KEY: misc\_feature  
 317 <222> LOCATION: (16)..(16)  
 318 <223> OTHER INFORMATION: N= 2'-O-MOE 5meU  
 321 <220> FEATURE:  
 322 <221> NAME/KEY: misc\_feature  
 323 <222> LOCATION: (17)..(17)  
 324 <223> OTHER INFORMATION: N= 2'-O-MOE 5meC  
 327 <220> FEATURE:  
 328 <221> NAME/KEY: misc\_feature  
 329 <222> LOCATION: (18)..(18)  
 330 <223> OTHER INFORMATION: N= 2'-O-MOE G  
 333 <220> FEATURE:  
 334 <221> NAME/KEY: misc\_feature  
 335 <222> LOCATION: (19)..(19)  
 336 <223> OTHER INFORMATION: N= 2'-O-MOE 5meU  
 339 <220> FEATURE:  
 340 <221> NAME/KEY: misc\_feature  
 341 <222> LOCATION: (20)..(20)  
 342 <223> OTHER INFORMATION: N= 2'-O-MOE 5meC  
 345 <400> SEQUENCE: 8

W--&gt; 346 nnnnnttcca cactcnnnnn

20

349 <210> SEQ ID NO: 9  
 350 <211> LENGTH: 20  
 351 <212> TYPE: DNA  
 352 <213> ORGANISM: Artificial Sequence  
 354 <220> FEATURE:  
 355 <223> OTHER INFORMATION: Novel Sequence  
 357 <220> FEATURE:  
 358 <221> NAME/KEY: misc\_feature  
 359 <222> LOCATION: (1)..(20)  
 360 <223> OTHER INFORMATION: All P=S  
 363 <220> FEATURE:  
 364 <221> NAME/KEY: misc\_feature

**VERIFICATION SUMMARY**  
**PATENT APPLICATION: US/09/996,292**

**DATE: 12/06/2001**  
**TIME: 11:33:46**

**Input Set : A:\ISIS4804.ST25.txt**  
**Output Set: N:\CRF3\12062001\I996292.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No  
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:40 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:88 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:154 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:202 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:268 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:346 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:424 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:502 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:568 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:640 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:688 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:736 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:790 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:868 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:934 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:1012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18  
L:1078 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19  
L:1156 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:1234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:1312 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22  
L:1396 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:1462 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24  
L:1534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25  
L:1613 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26  
L:1693 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:1772 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
L:1852 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29  
L:1930 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30  
L:2008 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31  
L:2086 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32  
L:2166 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33  
L:2184 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34  
L:2202 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35  
L:2220 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36  
L:2238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37  
L:2262 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38  
L:2286 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39  
L:2322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41  
L:2364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43  
L:2388 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44  
L:2412 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45  
L:2436 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46  
L:2460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47  
L:2484 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48  
L:2508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49  
L:2538 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/996,292

DATE: 12/06/2001

TIME: 11:33:46

Input Set : A:\ISIS4804.ST25.txt

Output Set: N:\CRF3\12062001\I996292.raw

L:2556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52  
L:2580 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53  
L:2598 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54  
L:2616 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55